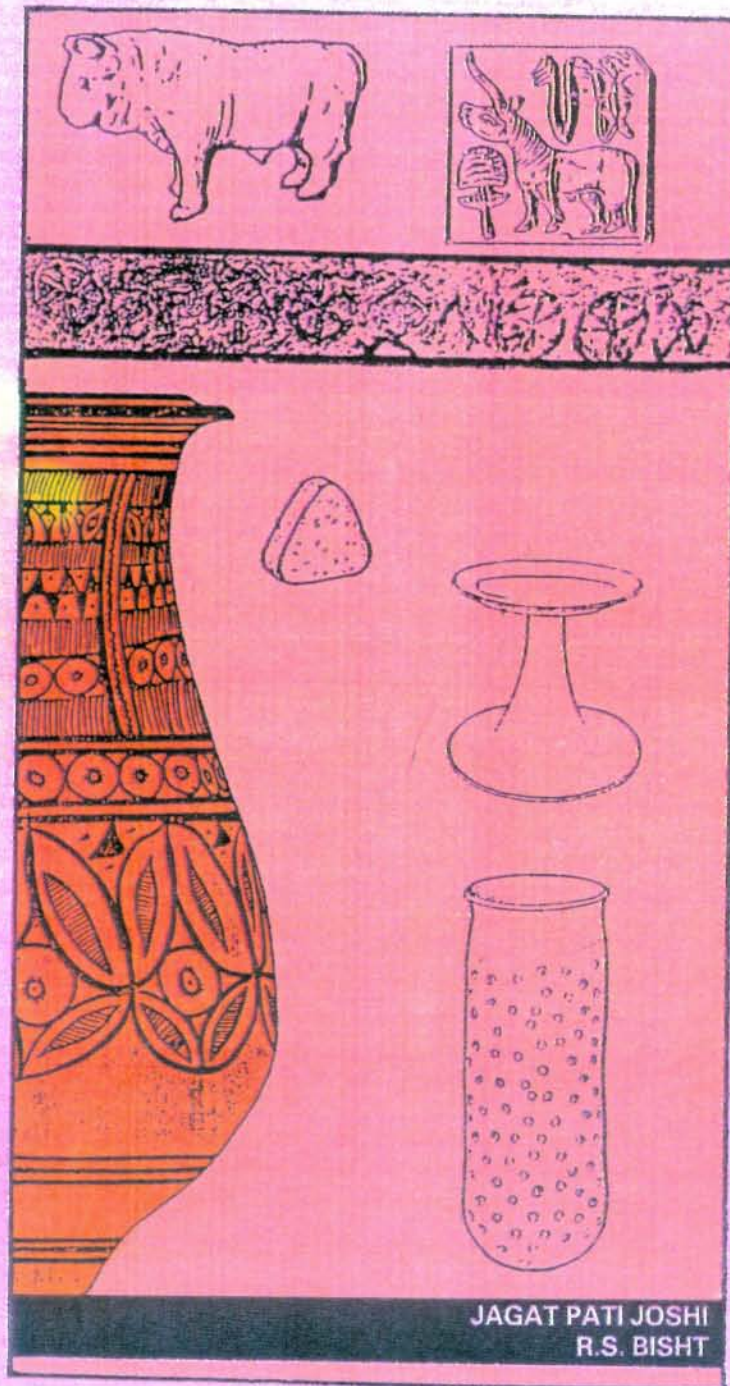
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INDIA AND THE INDUS CIVILISATION



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Published by the V.C.
National Museum Institute
(Deemed University)
New Delhi
1994

Published 1994



Price : Rs. 24.00

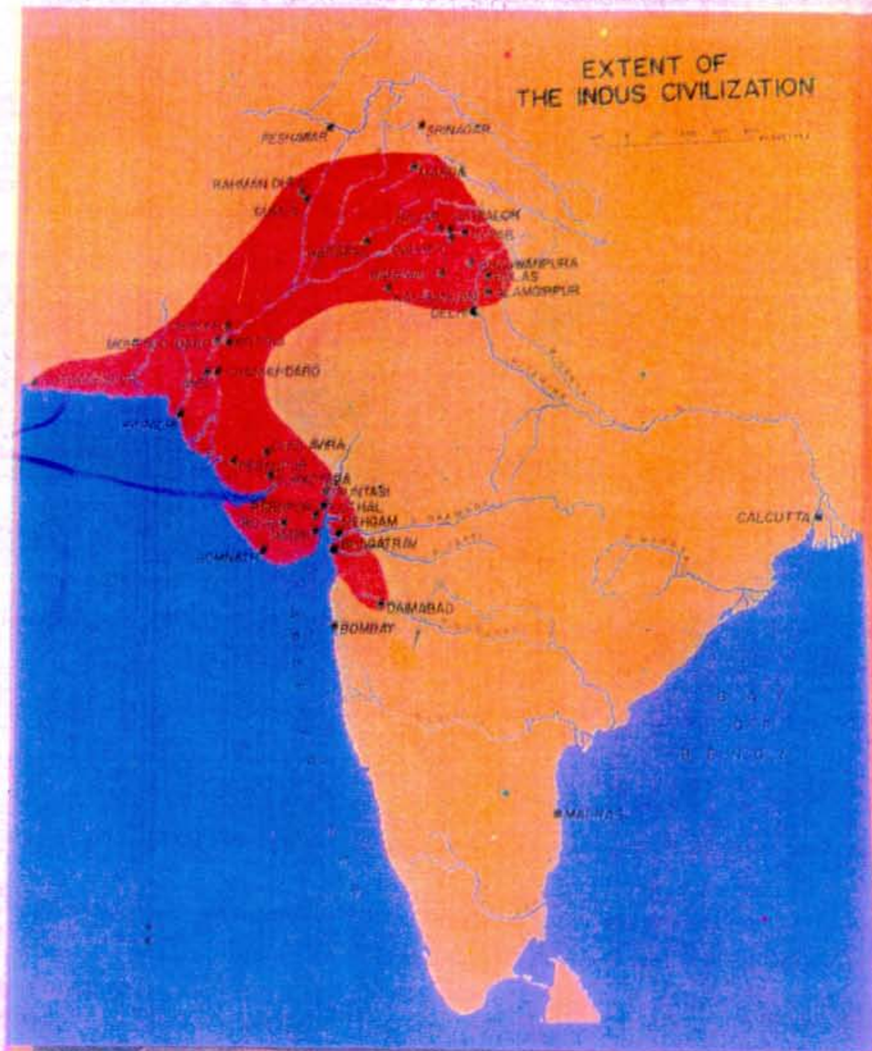
Printed at Navchetan Printers, 1-E/2, Jhandewalan Extension,
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EXTENT OF
THE INDUS CIVILIZATION
PESHAWAR
SRINAGAR
CALCUTTA
BOMBAY

INDIA AND THE INDUS CIVILIZATION

THE INDUS CIVILIZATION OF THE BRONZE AGE, also widely known as Harappa civilization, flourished during *circa* 2500-2000 B.C. (calibrated), ranks among the four widely known civilizations of the Old World, and in extent it is larger than the combined area of contemporary Egypt and Mesopotamia. Like the other Old World civilizations, the Indus civilization seems to have grown from the skilful utilization of the fertile river valleys. The general characters of the civilization is distinguished by gridiron layout of the cities, some with fortifications, elaborate drainage system, water management and a distinctive script. The Indus script, however, still remains undeciphered inspite of varied claims of its decipherment.

Since partition in 1947, excavation work has been going on in India and, as a result, the entire position regarding the extent, culture contents, regional variations, etc., of the Indus Valley Civilization has changed substantially. In India, the distribution of Harappan settlements covers a vast area which runs from Desalpur and Dholavira (Gujarat) in the west,

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Selected material from the sites mentioned in the text are exhibited.

Courtesy: Archaeological Survey of India, New Delhi; National Museum, New Delhi; Deccan College Post-graduate and Research Institute, Poona; Department of Archaeology, Govt. of Haryana and Deptt. of Ancient History and Archaeology, M.S. University of Baroda.

Manda in Jammu (J&K) in the north, Daimabad (Maharashtra) in south and Hulas, Uttar Pradesh, in the east. Among the excavated sites in India, Kalibangan, Lothal, Surkotada, Banawali, Dholavira, Kuntasi, Daimabad, Hulas and Manda are of potential importance for throwing fresh light on the cultural ethos of this civilization and to some extent to its origin in the antecedent cultures as evidenced at Kalibangan, Banawali, Dholavira, Padri and Kunal.

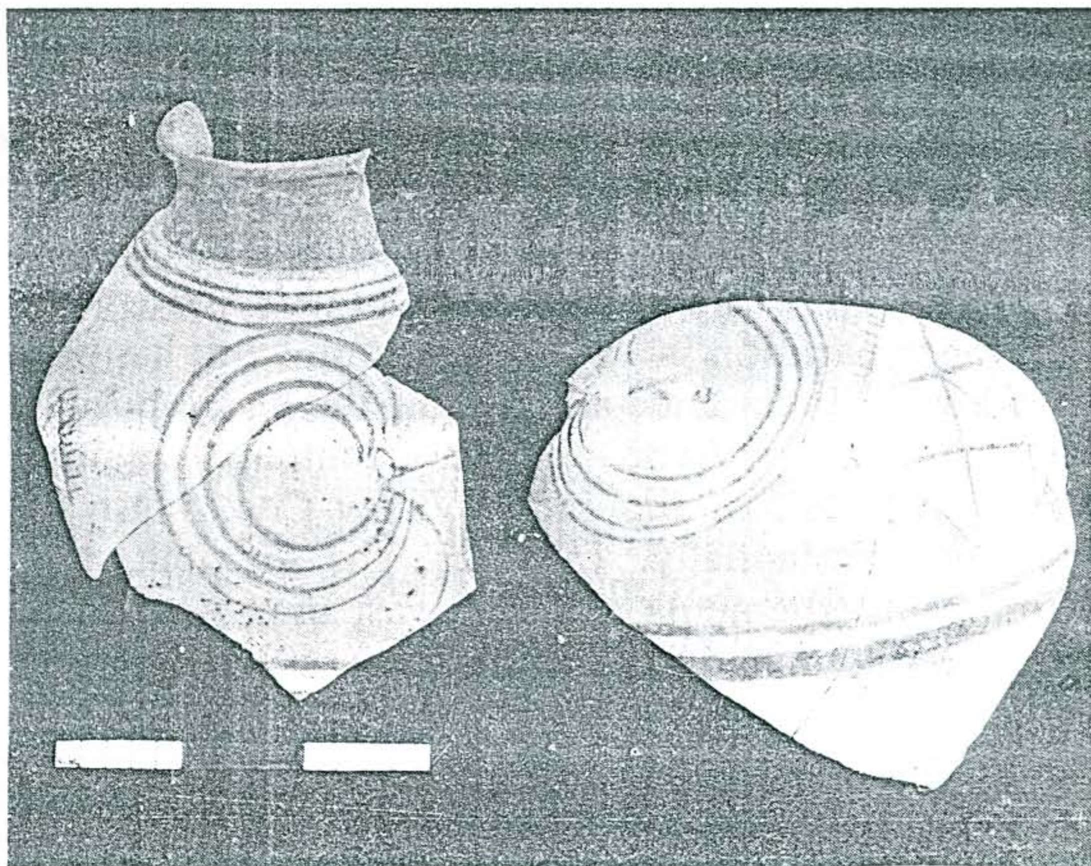


PLATE I . Kunal : Painted horned-deity motif

KUNAL

The ancient site at Kunal, district Hissar, Haryana, located on the dried-up bed of Sarasvati, has suddenly come into prominence on account of the discovery of most unique items of regalia, the first of its kind in the Indian sub-continent, consisting of two silver crowns, necklaces of semiprecious stones and gold and silver jewellery, all kept in a pottery jar.

The excavation has brought to light two successive sub-periods of the pre-Harappan culture followed by a transitional sub-period. The first settlers at the site dug up large pits usually approximating 2.0 m in diameter

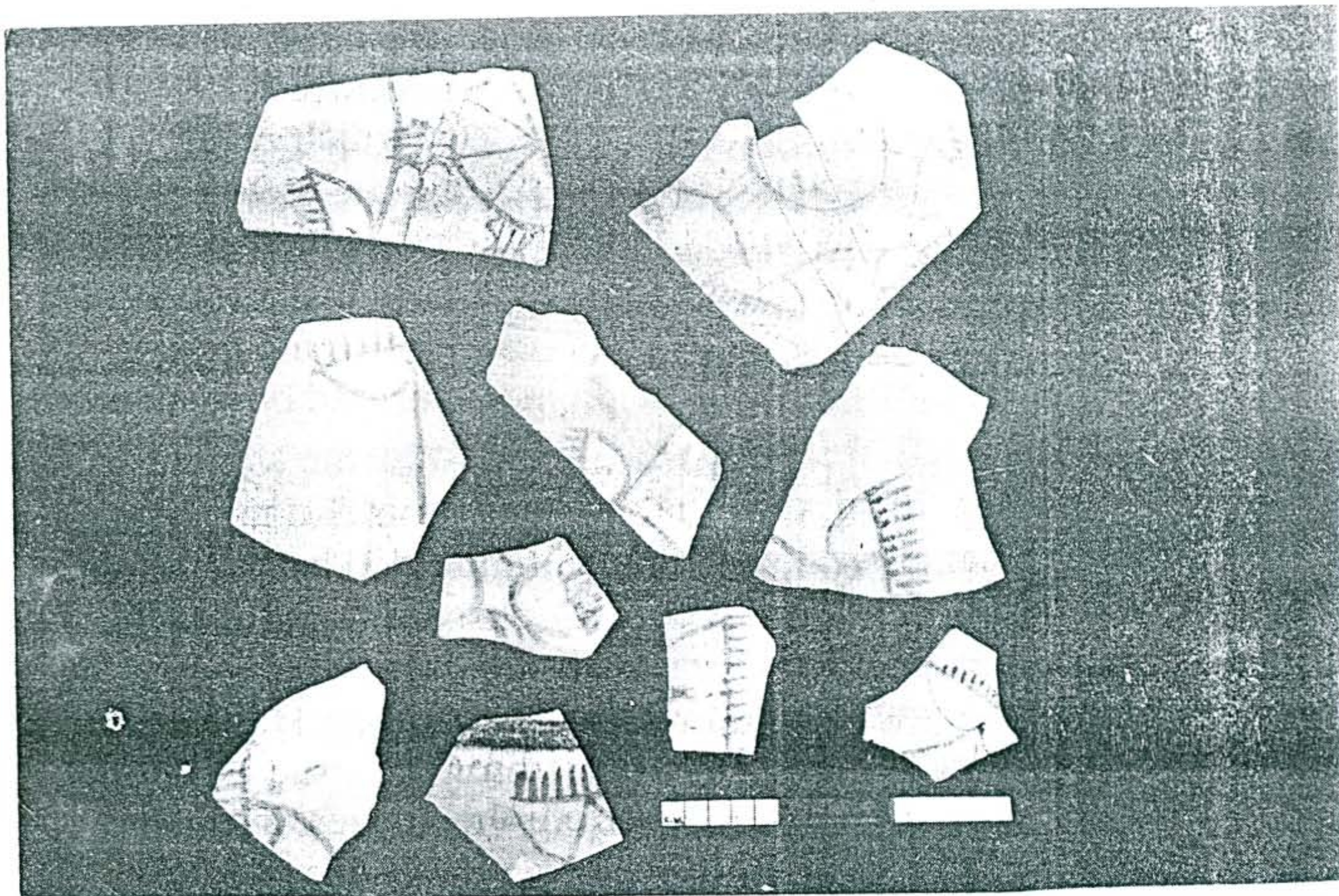


PLATE II : Kunal : Bio-chrome painted motifs

and 1.10 m in depth over which wattle-and-daub huts were raised. Presence of a hearth in one such pit proves this hypothesis. The people were familiar with agriculture and domestication of animals. Use of wheel for making pottery was in an advanced stage. The ceramics are largely close to the pre-Harappan pottery, found at Kalibangan and Banawali, in its fabrics, forms and surface decoration. Antiquities include bone-tools and micro blades of chalcedony. Copper is present although scarce. There are copper arrowheads and fish-hooks.

The second sub-period is characterised by the occurrence of moulded mud-bricks having the ratio of 3:2:1, a feature peculiar to the pre-Harappans at Kalibangan and Banawali. These bricks were used for lining the dwelling pits, the largest of which measured 2.75 metres in diameter. The pottery in its different manifestation resembles that of the preceding period. Significantly, it yielded a steatite seal which is surely a forerunner of the Harappan examples, albeit with geometric motifs and an incipient perforated boss at the back.

In the third and final sub-period at Kunal, there were rectangular houses made of moulded bricks which were also used in the preceding phase. In addition, the bricks made into the ratio of 4:2:1—a feature so ubiquitously associated with the expanding Harappans everywhere else—were also used for construction. For drainage of the waste water from the houses, a sanitary jar was found placed, or a soakage pit was dug outside on the street. Antiquities like arrow-heads, spear-heads

etc. of copper, bone points, bladelets of chalcedony, blades of chert, beads of terracotta, steatite, faience, carnelian, agate, lapis-lazuli and copper were in use during this sub-period.

The use of pottery increased in this sub-period and the forms were diversified. All the pre-Harappan fabrics found at Kalibangan are duly present in the assemblage. The pottery shapes included vases of different sizes, jars, bowls, basins and troughs, dishes, dishes-on-stand, etc. and were of different shades of red and buff, beautifully painted with black and white colours. The painted motifs comprised both geometrical and those showing animal motifs particularly the bucranian heads of diverse variety. Use of shell bangles and semiprecious stones like carnelian, steatite, etc. for ornaments increased. Copper and bone implements continued.

One of the most important contributions is the discovery of seven steatite seals. One of them, as mentioned before, comes from the penultimate sub-period. Pride of place, of course, goes to the regalia consisting of two crowns, armlets, bangles, necklace made of silver, beads, gold pendants of various sizes and more than twelve thousand beads of semiprecious stones, etc.

The seals predating the mature Harappan ones prove that the seal manufacturing technique in India had arrived here in a pretty early period, because uptill now it was thought that it was a Harappan innovation in India. On the basis of engraved motifs, these seals are quite different from the known Harappan seals, albeit their shape and style are somewhat similar. Use of the script is, however, missing.

KALIBANGAN

Kalibangan lies on the left bank of the river Ghaggar (ancient Sarasvati) in the northern part of Rajasthan. It comprises two mounds, the smaller one to the west and the larger one to the east, recalling identical disposition at Mohenjo-daro.

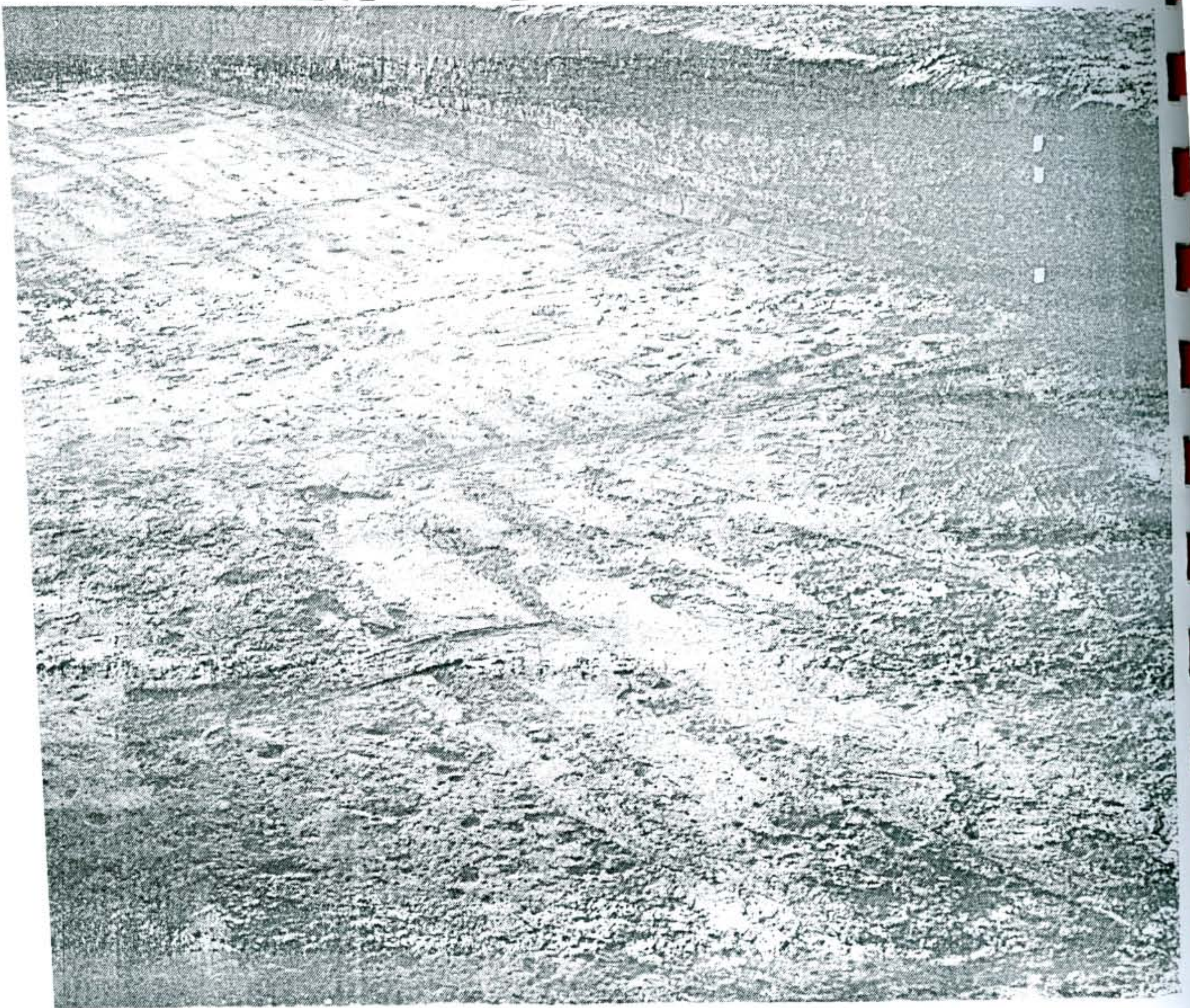


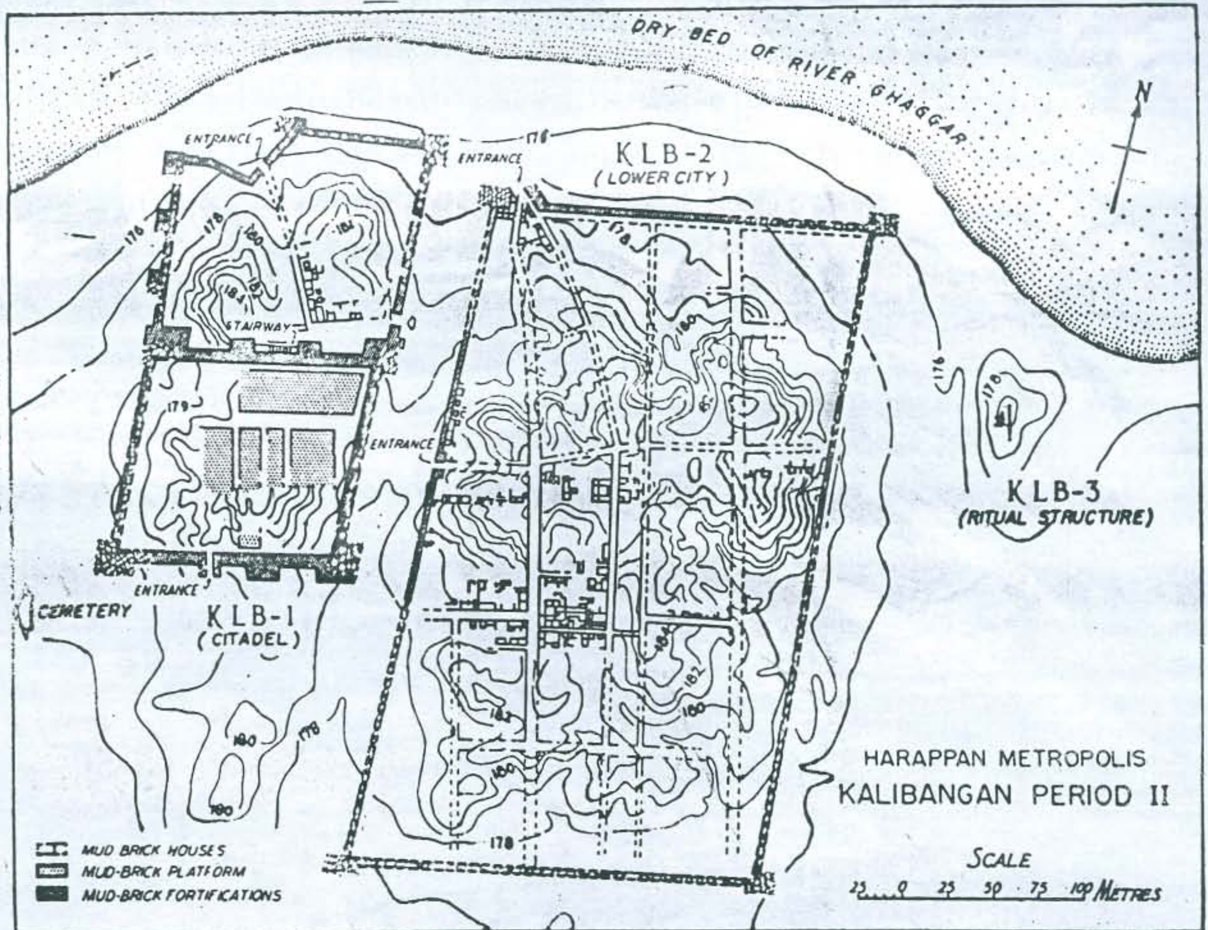
PLATE III : Kalibangan : Part of a ploughed field showing a grid of furrows.



PLATE IV : Kalibangan : Pre-Harappan Structures

The excavation brought to light a gridiron layout of a Harappan metroplis. Another significant evidence is in the form of a non-Harappan settlement, underlying the remains of the Harappan citadel.

The pre-Harappan settlement, designed like a parallelogram, was surrounded by a fortification made of mud bricks. The houses within the walled area were also made of mud-bricks. The distinctive trait of this



period was the pottery which was significantly different from that of the succeeding Harappans. An outstanding discovery of the excavation, however, was a ploughed field showing a grid of furrows. It was situated to the south-east of the settlement outside the town-wall. This is, perhaps, the earliest ploughed field excavated so far.

During the Harappan period, the structural pattern of the settlement was changed. There were now two distinct parts: the citadel on the west and the lower town on the east. The former was situated atop the remains of the preceding occupation to gain an eminence over the lower town which was laid out on the natural plain



PLATE V : Kalibangan : Street

towards the east. The citadel complex was a fortified parallelogram, consisting of two equal but separately



PLATE VI : Kalibangan : Street and lane



PLATE VII : Kalibangan : Terracotta triangular cake with engraved horned-figure

patterned parts. The fortifications were built throughout of mud-bricks. The southern half of the citadel contained some five to six massive platforms, some of which may have been used for religious or ritual purposes. The northern half of the citadel contained residential buildings of the elite. The lower town was also fortified. Within the walled area was a gridiron plan of streets running north-south and east-west, dividing the area into blocks. The houses were built of mud-bricks, baked bricks being confined to drains, wells, sills, etc.

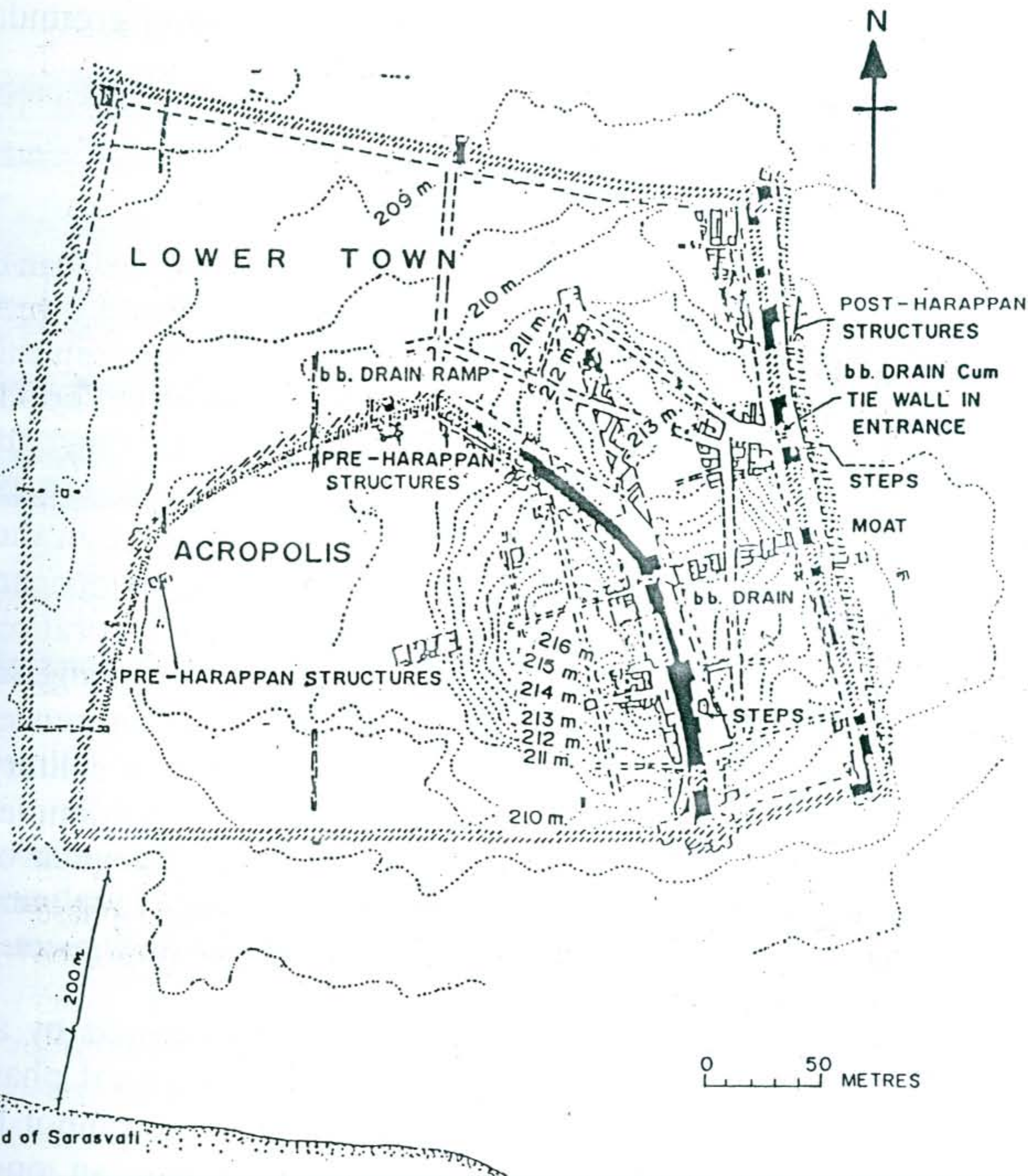
Besides the above two principal parts of the metropolis, there was also a third one, situated upwards of 80 m east of the lower town. It consisted of a modest structure, containing four to five 'fire altars' and as such could have been used for ritual purposes.

Of the finds obtained from this excavation, a cylinder seal and an incised terracotta cake with a horned figure are perhaps significant.

The cemetery of the Harappans was located to the west south-west of the citadel. Three types of burials were attested: extended inhumation in rectangular or oval grave-pits; pot-burials in a circular pit; and rectangular or oval grave-pits containing only pottery and other funerary objects. The latter two methods were unassociated with skeletal remains.

BANAWALI

The ancient site at Banawali, district Hissar, Haryana, is located on the right bank of the 'lost' Sarasvati. The antiquarian remains are found spread


BANAWALI EXCAVATIONS
N
LOWER TOWN
209 m.
210 m.
211 m.
212 m.
213 m.
POST-HARAPPAN STRUCTURES
bb. DRAIN RAMP
bb. DRAIN Cum TIE WALL IN ENTRANCE
PRE-HARAPPAN STRUCTURES
STEPS
MOAT
ACROPOLIS
bb. DRAIN
216 m.
215 m.
214 m.
213 m.
212 m.
211 m.
PRE-HARAPPAN STRUCTURES
STEPS
210 m.
200 m.
0 50 METRES
Dry bed of Sarasvati

over an area of about 400 m square and attain a height of about 9 to 10 metres above the surrounding ground level.

The excavations at this site have yielded the remains of pre-, intermediate, mature and post-Harappan cultures.

Period I (Pre-Harappan/Kalibangan Culture), 3.20 m of regular occupational debris, has revealed three sub-phases. The first two phases represent geographical extension of the pre-Harappan culture found in Period I of Kalibangan. The settlement was a fortified one and mud-bricks of standardised sizes set in mud mortar were the principal building material. The bricks were in the ratio of 3:2:1. In pottery, all the six fabrics of Kalibangan I together with form, surface treatment and decoration are duly present all throughout. Chert blades, triangular cakes, etc., are conspicuous by their absence. Chalcedonic microblade is represented by a solitary example. Copper is scarce. There are plentiful examples of terracotta bangles, grey in colour and rectangular or triangular in cross section, while some bangles are burnt red having circular cross-section as well as black painted motifs on them.

Period IA (Pre Defence phase) is represented by an average deposit of 0.60 m with one structural phase although the possibility of the second one cannot be ruled out. During this sub-period, it was an open settlement having no circumvallation. Comparatively, the pottery, more particularly that of fabric 'A', is finer in quality in terms of clay, baking, lightness, surface-treatment and painted motifs. The moulded



PLATE VIII : Banawali : General view of excavated remains

bricks set in mud mortar were the usual building material. A solitary fired brick-structure resting right upon the natural soil also belongs to this sub-period.

Period IB (Defence phase), having 1.60 m deposit, is represented by two major constructional phases of defensive wall and five phases of houses. Originally, the fortification wall was 1.40 m wide with no tapering on either side. Due to faulty construction, it soon started developing signs of tilting and cleavage and thus necessitating its augmentation by raising ancillary dwarf wall along the inner side. Since this measure did not

seem to have withstood as it was further damaged from the outside by water action, the people rebuilt it into a massive fortification wall of which the extant width has been noticed to be 2.50 to 3.50 m because some portion of it has been chiselled out or sliced away slightly obliquely from outside by the builders of the succeeding period. It is interesting to note that the defensive wall looks like a horse-shoe following the existing natural elevation. The longer axis of the settlement most probably lay from east to west. Although, at the initial stage, the pre-Harappans did not leave any space between the wall and the houses built inside, but after sometime, they always left enough room for a narrow collateral passage.

Period IC *(Transitional phase)* is denoted by a 0.90 to 1.20 m thick deposit and is marked by drastic and diagnostic changes in architecture, planning and antiquities in an otherwise continuing ceramic milieu of the preceding sub-period. The entire settlement was planned and constructed *de novo*. The dichotomous layout, which would be inherited by the Harappans, was introduced during this sub-period. The fortification of the previous period was externally chiselled or partially sliced away from the outside in order to raise another massive wall against it and converted the walled area of the preceding period into citadel, and the lower town was laid out continuously towards the east, north and west. The bricks were moulded into new measurements giving the ratio of 4:2:1. At several places, it was observed that the orientation of houses of the preceding sub-periods was modified or changed altogether. It was

also firmly confirmed that the radial arrangement of streets of the lower division came into being due to the curvilinear nature of the antecedent fortification.

There were some proto-Harappan forms in pottery with crimson red slip in an otherwise continuing ceramic corpus of the preceding phases. It was, however, noted that in the pottery of this phase, the pre-Harappan painted motifs tended to become simpler and sparse and use of white pigment became less popular progressively.

Most significantly, certain items like triangular terracotta cakes and '8'-shaped clay objects, animal figurines and chert blades, all of which would subsequently become the usual objects of the mature Indus culture, made their debut. Besides, number and quality of minor antiquities like beads of steatite, chalcedony and terracotta, and clay bangles of usual red fabric and circular cross-section proliferated. Still, the typical Indus pottery, seals, sealings, weights, a variety of other beads, script, etc. were conspicuous by their absence.

Period II, which belonged to the Harappans at Banawali, invites special attention. Its imposing deposit is found spread over a large area of the site. Then, it soon started to reveal a unique example of town planning which consisted of a bilocular settlement enclosed within a general fortification. The two principal divisions were an acropolis or citadel on a higher level and a lower town, segregated from the former, by massive wall and enclosed by a general fortification. The bipartite wall, primarily meant for fortifying the acropolis, started betraying quite an unusual configuration on the

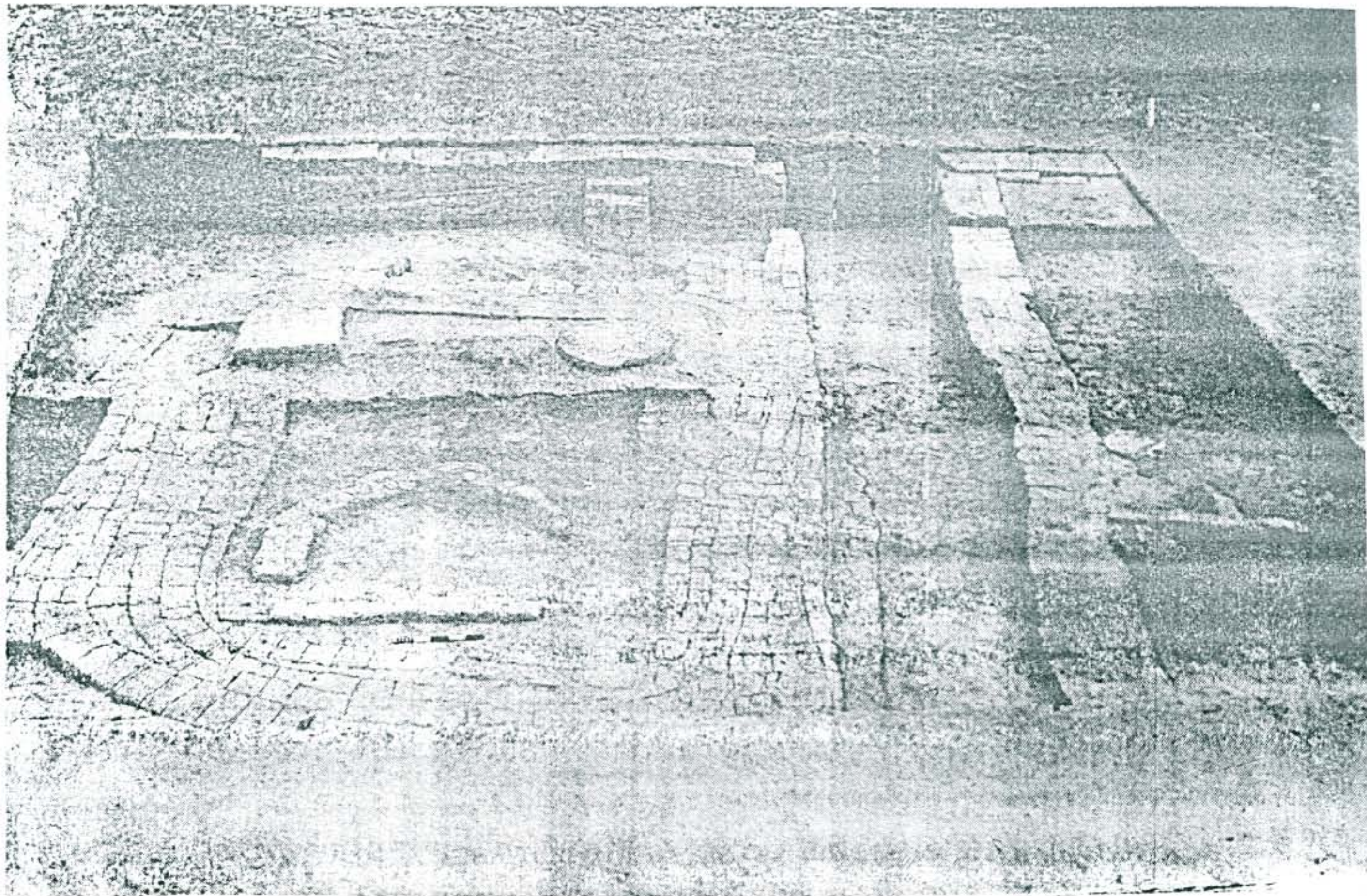


PLATE IX : Banawali : Apsidal structure with a fire place

north-east. The later work revealed that the Harappans in fact inherited the planning from their predecessors of Period IC.

As usual, in any Indus town, streets played a special role at Banawali too. Those were laid out in a rather radial or semi-radial system. The elaborate gate-complex was found to be provided with flanking bastions and a broad passageway. An apsidal structure with a fire altar is also available in the citadel.

The ceramic corpus, too, provided valuable information. Significantly, certain Kalibangan pottery

traditions persisted strongly all through the period at the site. Rather, many forms were not only adopted or modified but bequeathed to the succeeding culture as well.

Among the antiquities, terracotta female figurines, close to the figurines of Indus types, usual male and animal figurines, seals and sealings, weights, pieces of gold ornaments, beads of lapis lazuli, etched carnelian, faience, steatite, clay and copper etc., were duly found. Besides, the site has produced a rich harvest of antiquities. The most important is a complete clay model of a plough.

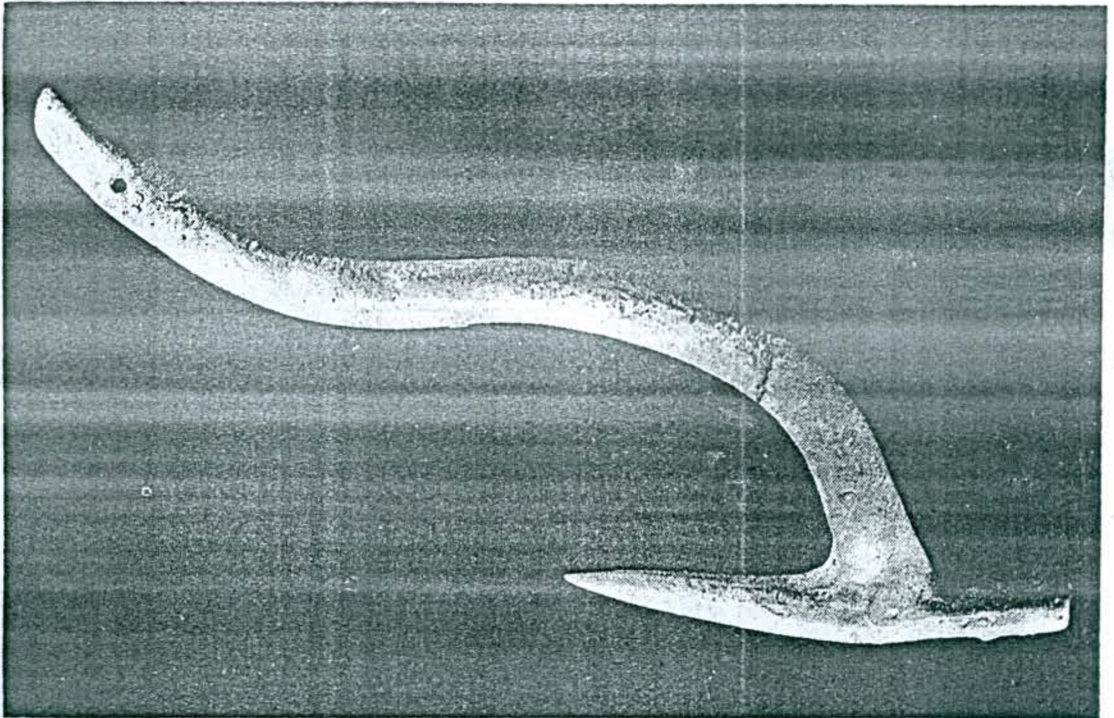


PLATE X : Banawali : Terracotta Plough

Period III (post Harappan culture) arrives at the site after a desertion. The new comers settled down to the

east of the older site. On the older mound, they dug up only large and deep pits to dump the broken pottery or refuse, or for making kilns for baking pottery or clay nodules.

Bricks as building material had gone out of use. Instead, the house walls were made of well-levigated fine earth. The sides were usually plastered over with the self-same earth but often mixed with cow-dung or husk or both. Even the house floors were made of the same earth successively.

The most distinguished item of this period is the ceramics which is the sturdy and heavy ware, made of fine clay, baked carefully and dressed with deep-toned slips of oily gloss. By and large, this pottery has shown strong genetic relationship with two distinct ceramics,

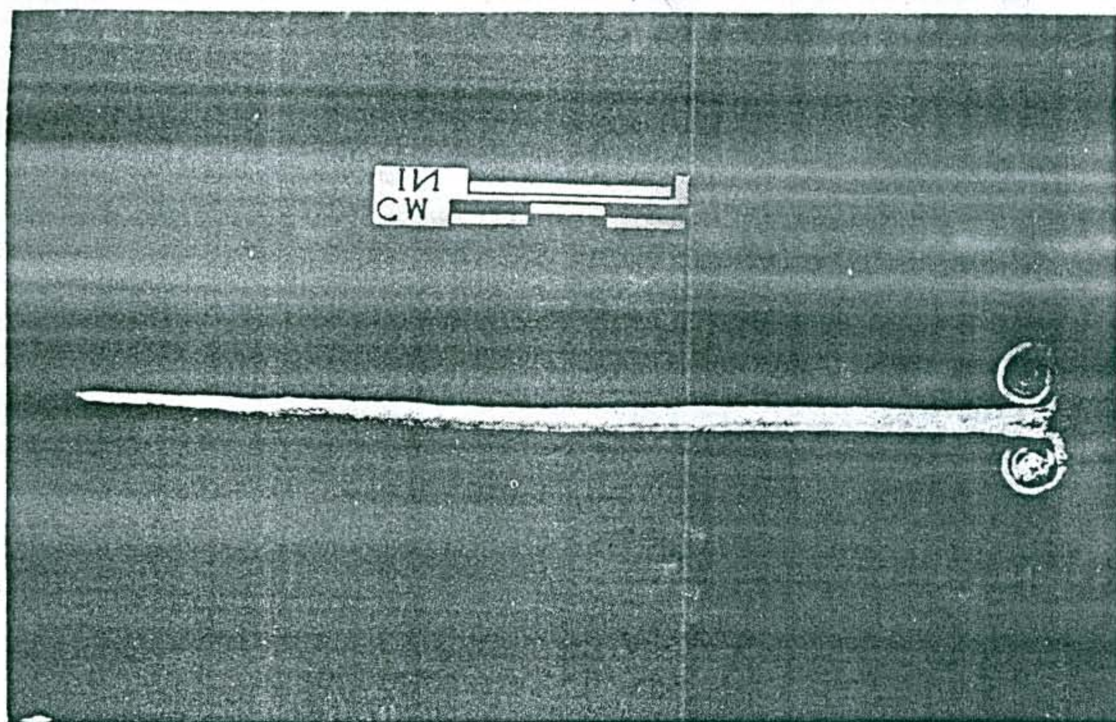


PLATE XI : Manda : Pin

i.e., the Kalibangan pottery and the Bara pottery. In addition, there is a third category of pottery in red ware of coarse fabric and thin wall. There are found incised or applique pattern or both in the fashion found on the type of the Bara ware. However, this makes altogether a new fabric hitherto unknown.

Antiquities are very few and exclude all classical Indus items except clay nodules of different shapes. Triangular terracotta cakes are, however, absent. Most valued antiquity of the period is a black terracotta object of which only three fragments were found. It appears to be some sort of cult object associated with serpent worship.

MANDA

Manda is situated 28 km west of Jammu on the right bank of the river Chenab, in the foot-hill of the Sivalik. Within the geographical boundaries of India, it represents the northernmost identified site of the Harappa culture. The excavation at the site yielded a three-fold sequence of cultures with two sub-periods in the earliest. In sub-period IA, the site was under occupation by the Harappans, as represented by the finds of typical Indus pottery, triangular terracotta cakes and a double-spiral headed copper pin of West Asian type. From the unstratified levels, an unfinished seal of stone, testifying to the Harappan affiliation was also obtained. In sub-period IB, Harappan pottery continues along with the appearance of the grey ware associated with Painted Grey Ware.

ALAMGIRPUR

The excavations at Alamgirpur, district Meerut (U.P.), have shown that the Harappan culture extended up to this region. Of course, it is clearly a late stage of the Harappan culture. Here, in Period I, the pottery included dish-on-stand, goblet with pointed base, beaker, goblet with a concave neck and elongated base, and shallow basins. These shapes are comparable to Harappa, Rangpur IIA, Lothal and Rupar I. Designs are executed in black pigment over a red-slipped surface. Simple bands, intersecting circles, plant and peacock are available in design repertoire. Block and hatched designs are also available. Graffiti marks on the pottery have affinity with Lothal II seals. Kiln-burnt bricks are in evidence; large platters and troughs with open base have also been found as also beads of steatite and semiprecious stones. Terracotta cakes are met with in large numbers. Noteworthy are the textile impression on a potsherd and a terracotta bull. No evidence of seals, chert blades and systematic town-planning has been noticed so far. This period is followed by Painted Grey Ware culture after a break indicated by a weathered stratum.

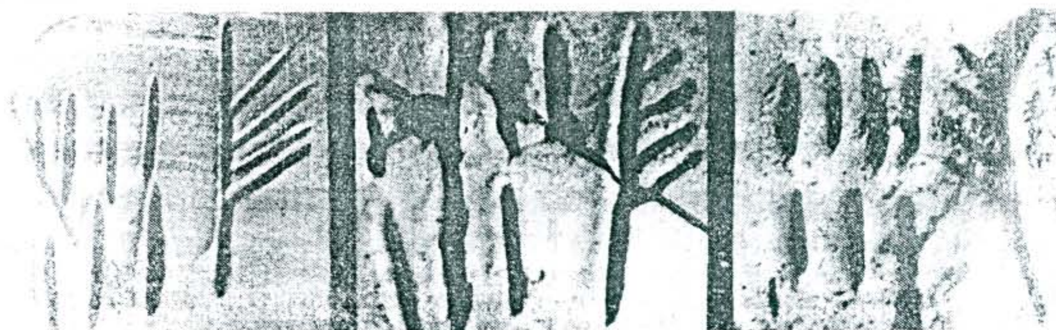


PLATE XII : Alamgirpur : Incised Harappan letters

DHOLAVIRA

The ancient ruins at Dholavira, district Kutch (Gujarat), are spread over an area of about 100 hectares, nearly half of which is appropriated by the fortified settlement of the Harappans.

. As a result of excavations, Dholavira has emerged as a major Harappan city, remarkable for its exquisite planning, monumental structures, aesthetic architecture and amazing water-management system. Besides, it has provided a long succession of rise and fall of the first Indian urbanisation that is the Harappan çivilization. Furthermore, Dholavira now enjoys the unique distinction of yielding an inscription of ten large-sized signs of the Harappan script: indeed the oldest sign-board of the world. A variety of funerary structures is yet another feature of exceeding importance throwing new light on the socio-religious beliefs, thereby indicating the presence of composite ethnic groups in the Indus population of Dholavira.

Through the enormous accumulation caused by successive settlements of over a millennium, the archaeological operations have revealed seven significant cultural stages (numbered from Stage I to VII) of the rise, culmination and fall of the Harappan urban system.

Stage I starts right from the virgin ground. The first settlers came well-equipped with advanced ceramic techniques, copper-working, lithic industry, bead-making, stone-dressing and with definitive principles of planning and architecture. They constructed a formidable fortification (as thick as about

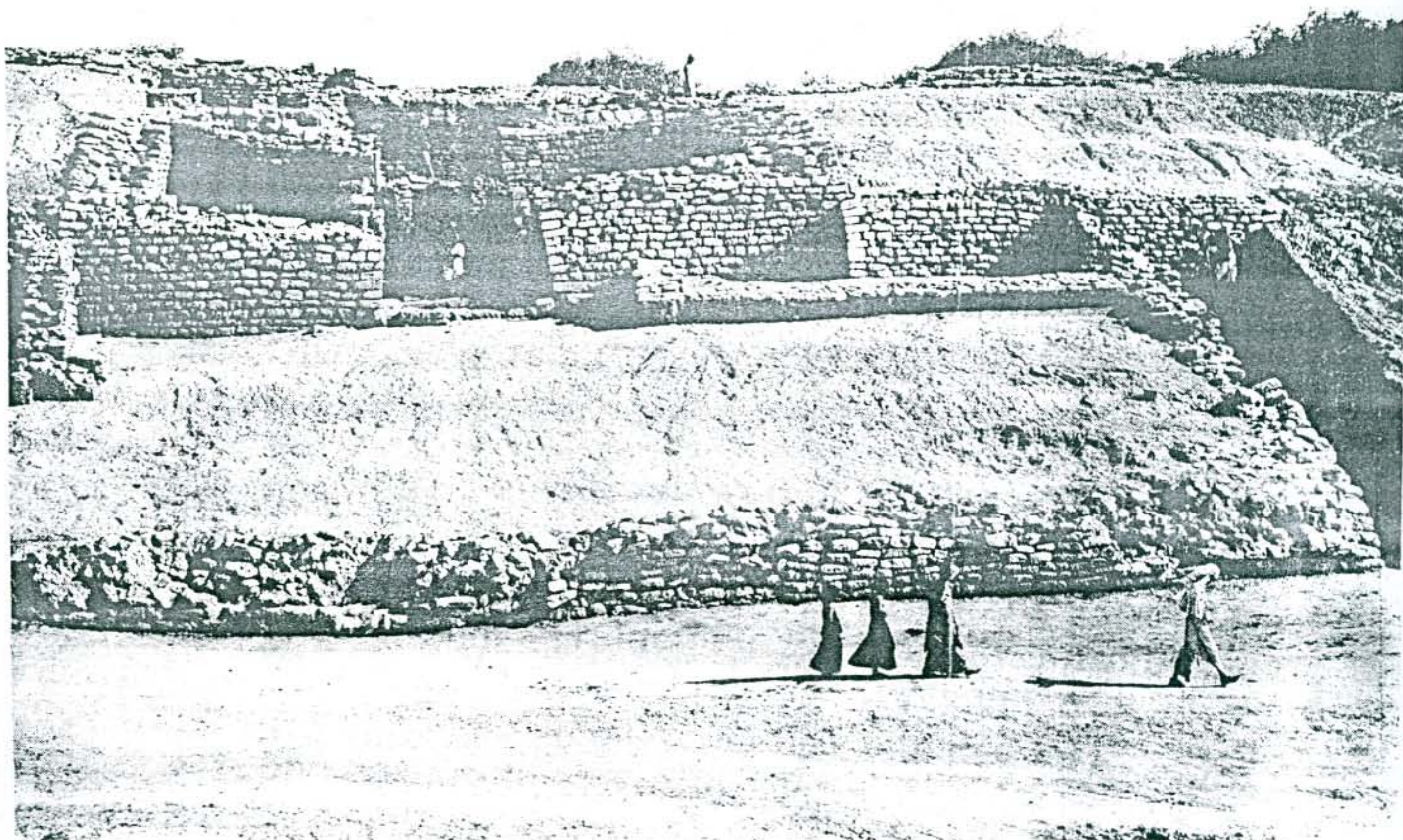


PLATE XIII : Dholavira : North gate

11 metres at the base) around the settlement. The houses were made of moulded mud bricks of standardised sizes providing the ratio of 4:2:1.

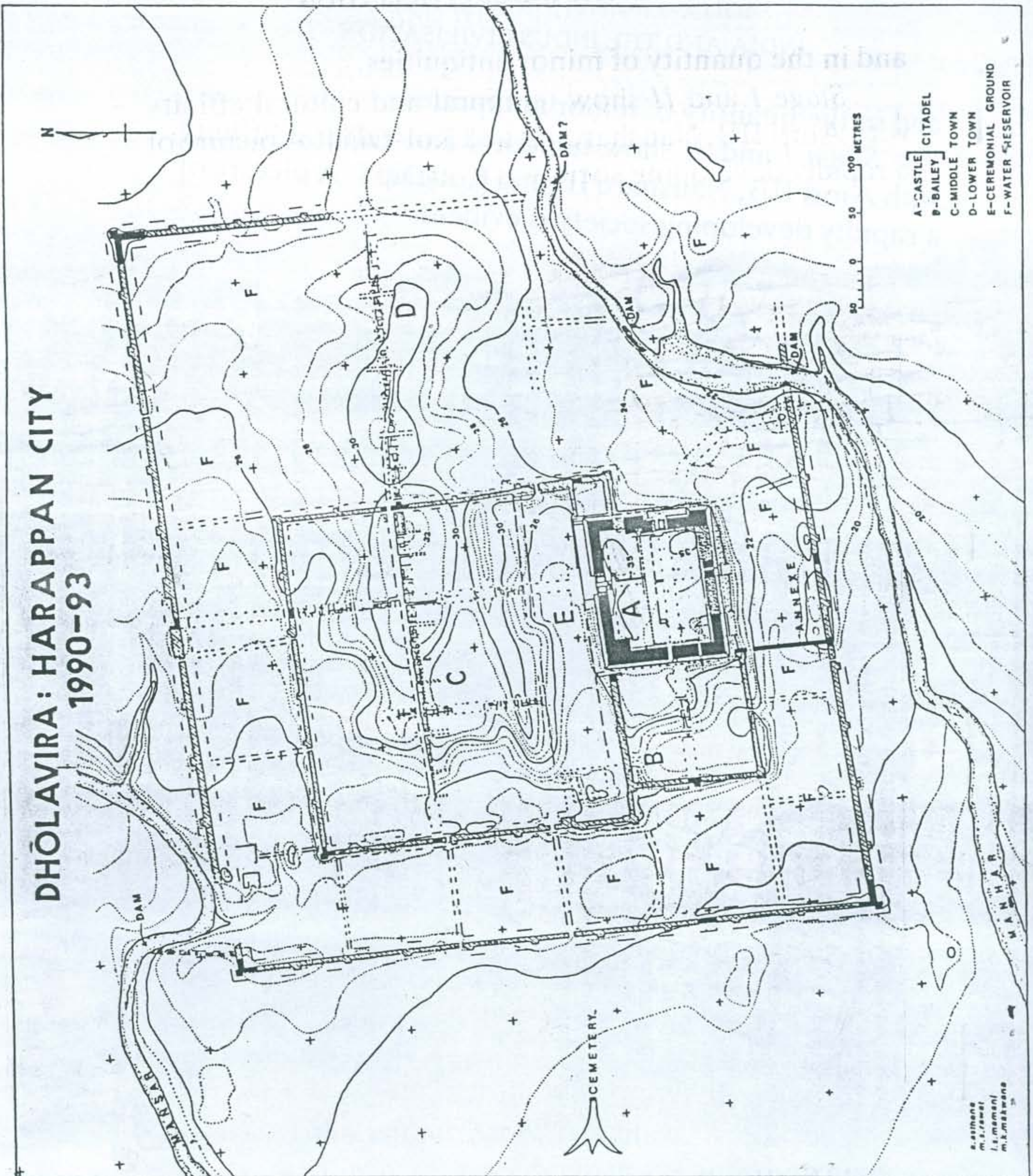
In *Stage II*, the fortification wall was widened. The settlement extended to the north. While the cultural objects of the earlier Stage remained in use, there is observed an increase in ceramic forms and decoration,

and in the quantity of minor antiquities.

Stage I and *II* show temporal and cultural affinity with Amri IIB, Nausharo ID and Kot-Diji I. A picture of a rapidly developing society is evident.



PLATE XIV : Dholavira : East gate


DHŌLAVIRA : HARAPPAN CITY
1990–93
N
A-CASTLE
B-BAILEY
CITADEL
C-MIDDLE TOWN
D-LOWER TOWN
E-CEREMONIAL GROUND
F-WATER RESERVOIR
50 0 50 100 METRES
DAM
DAM?
ANNEXE
CEMETERY
MANSAR
MANHAR

Stage III is a very creative period at Dholavira. The small settlement grew into a large town having two fortified major divisions in addition to annexes and water-reservoirs—all within a peripheral wall. The existing fortified settlement was, in fact, made into citadel and another fortified sub-division was added to it on the west. These two sub-divisions have been designated as castle and bailey respectively.

The extended residential area of *Stage II* was cleared of structures and nicely levelled and provided with floors successively. Thus, a long and wide open ground, for ceremonial purposes indeed, was carved out. To the north of it, main residential town was laid out and secured by separate fortification wall provided with gates, bastions and drains. Inside, the town was divided into several residential sectors by streets and lanes laid out in the gridiron pattern.

Towards the closing decades of *Stage III*, the entire settlement witnessed a natural catastrophe, most probably caused by an earth-quake of severe magnitude, as the tell-tale marks have clearly indicated. Consequently, large scale repairs were executed and significant changes were brought about in the planning. From certain areas of citadel as well as residential town, some of the houses of the sectors were removed and, more significantly, the third principal division with well-defined residential sectors and street-system was founded to the east of the earlier one. The city wall was also extended eastwards. The monumental gateways of castles, alongwith their front terraces, as exposed now, had been certainly raised by this sub-stage.

This was the time when the entire settlement reached to its fullest growth. The cityscape, now, possessed three principal divisions, a ceremonial ground and a series of water-reservoirs all around within the outer walls.

Besides planning, in areas of antiquities significant changes are also observed in the cultural milieu of that stage. The most distinct Indus elements including stamp seals, weights, script and typical pottery forms and motifs made their debut. Archaeologically speaking, the new set of information will now compel archaeologists working in South Asia to reconsider their views, and in most cases, to reassess their material coming from the strata that precede the mature Harappan deposit.

Stage IV belongs to the mature Harappan culture which is so widely familiar from a number of excavated sites. The city of *Stage III* was scrupulously maintained alongwith the monumental structures such as gateways, fortification walls and the drainage system. The famous inscription of ten large-sized signs of the Harappan script found in a chamber of North Gate should also pertain to this stage. All the classical Harappan elements such as pottery, seals, lithic tools, beads, weights and other items of gold, copper, stones, shell and clay are now found in abundance. Among most impressive items are elements of functional pillars and free-standing columns made out of locally available limestone.

Stage V is characterised by the general decline particularly in the maintenance of the city as is more vividly reflected in citadel. However, the other items such as pottery, seals, etc., continue in their developed

forms and styles. This stage was followed by a temporary desertion of the site.

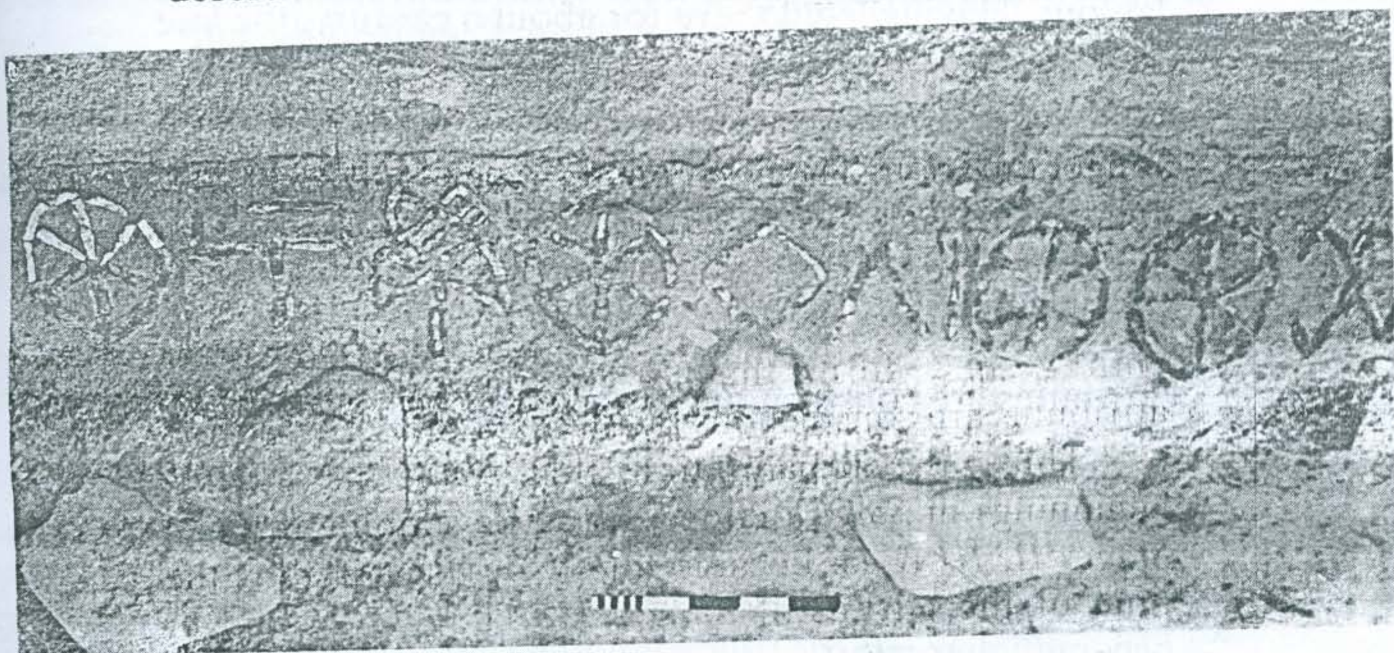


PLATE XV : Dholavira : Inscription of ten Harappan signs

The following *Stage VI* presents an entirely different form of the Harappa culture that has been found widely distributed in other parts of Gujarat. The culture has certainly undergone a drastic transformation. There is observed a perceptible change in the traditional pottery, stamp-seals and weights. Furthermore, most significantly, in this stage, new pottery elements coming from different areas, made their appearance. These include black-and-red and grey ware pottery, occasionally decorated with paintings in the fugitive white, pottery of the Jhukar style and fabric, a coarse red ware pottery with incised-cum-applique motifs and the typical bowls of red ware found in the rest of Gujarat. The conventional principles of town

planning were not followed and the one time city shrank into a much smaller settlement with a different inner lay-out. Having lived there for about a century, the late Harappans abandoned the settlement.

Stage VII, appears after the second desertion of a longer duration. The new comers appeared to be closely related to their predecessors of the *Stage VI* as the ceramic assemblages remained the same. Strangely enough, the new people constructed their houses in an entirely new form that is circular. All the urban attributes are conspicuous by their absence.

Thus, the urbanisation that made its humble beginnings in *Stage I* and went on developing through *Stages II, III & IV* became totally de-urbanised by the time of the advent of *Stage VII*. The site was never occupied thereafter.

In its heyday, the Harappan city at Dholavira was designed like a proportionate parallelogram outlined by a strong fortification made of sun-dried bricks. The area thus enclosed measures 771 metres in length and 616.80 metres in width. A good deal of forethought must have gone into planning the water-reservoirs, three principal divisions, i.e., the citadel, middle Town and lower Town, and also the 'ceremonial' ground.

The citadel, which stands majestically on the south side, consists of two fortified divisions on the east and west, christened castle and bailey, respectively. The middle Town, also fortified, lies to the north and is separated from the citadel by a long and wide ceremonial ground. To the east of the middle Town was laid out the Lower Town which was set within the

general fortification.

In its heyday, the entire city might have looked like a lake-city or a *jala durga* (water fort). The area reserved for the tanks was immense, approximately 750 m in length along the southern and northern margins, while the width varied from 70 to 80 m. In the west, the tank area was about 590 m. In the southeastern area, for example, the reservoir covered about 5 ha, the largest within the walled area. The walls acted as effective bunds. Both faces of the wall were plastered with fairly water-repelling sticky clay. Special and vulnerable areas, mostly on the exterior face, were veneered with hammer-dressed stones.

Keeping in mind the general slope of the city, several bunds were constructed across the width of the tanks to reduce the pressure of the stored water body on the city walls. The bunds also served as causeways for easier movement. In times of scanty rainfall, they enabled the water to get stored in selected tanks instead of being spread out over a large area and reduced quickly by evaporation and seepage. In the area designated as the citadel, an interesting network of drains, both small and large, was discovered. Most of the drains intersect each other and ultimately link up with an arterial drain.

The entire drainage system could have been set up to assiduously conserve every drop of rainwater that fell in the city. The water must have been a treasured commodity in an area lacking in perennial source of surface water and where the ground-water, largely brackish and saline, tends to dry up during droughts.

SURKOTADA

Surkotada, situated 160 km north-east of Bhuj in Kutch, Gujarat, has provided much useful evidence relating to the diffusion of the Indus Civilization from Sind via the land route. The excavation brought to light a



PLATE XVI : Surkotada : Gateway Complex of the Citadel

sequence of three cultural phases of the Harappa culture. From the very beginning of the occupation, the settlement was fortified on a rectangular plan, divided into two equal parts. The western half was used as a citadel while the eastern served as residential division. The fortifications were made of mud with a veneer of rubble masonry. The objects obtained from the deposits of this Period were largely Harappan, and included a

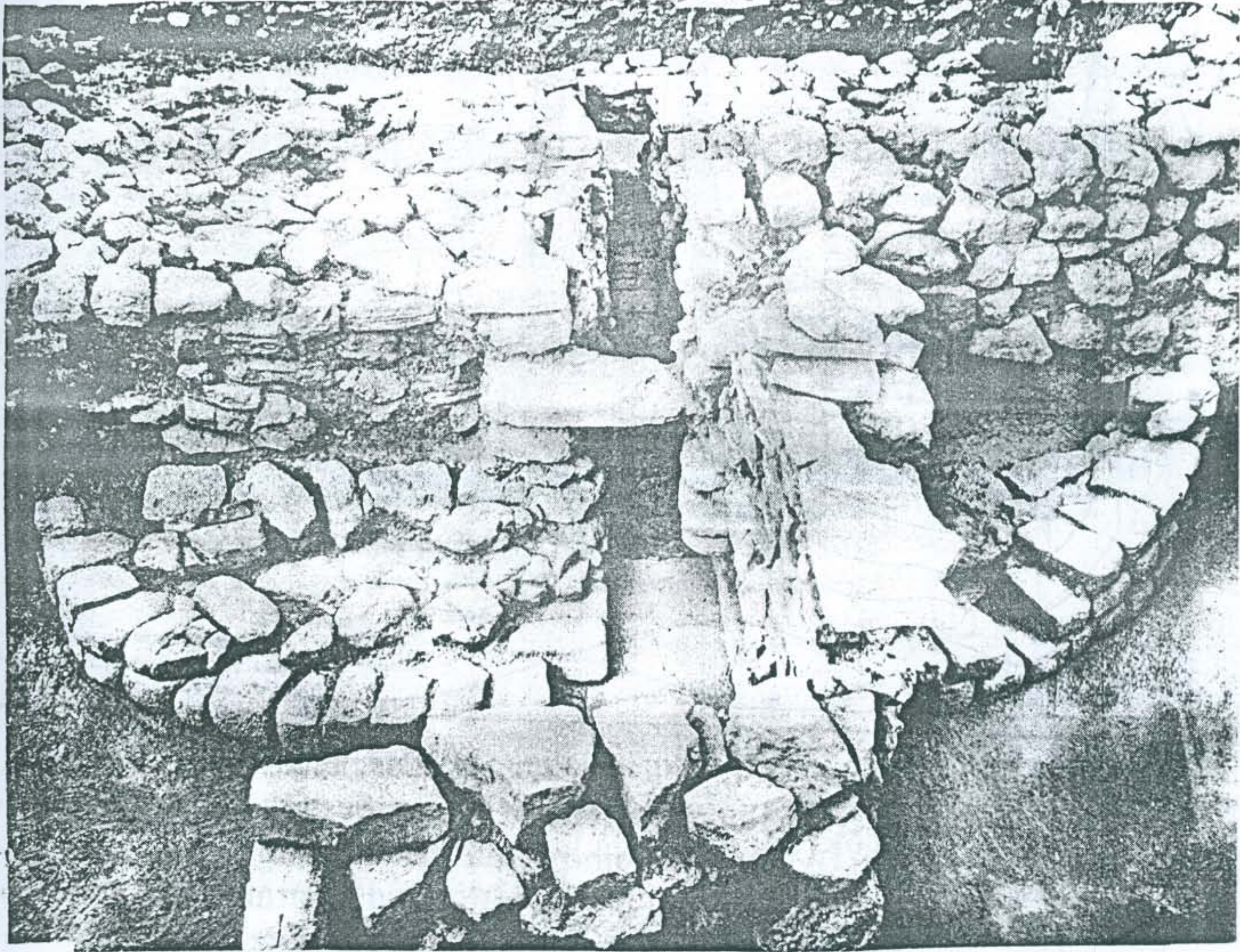
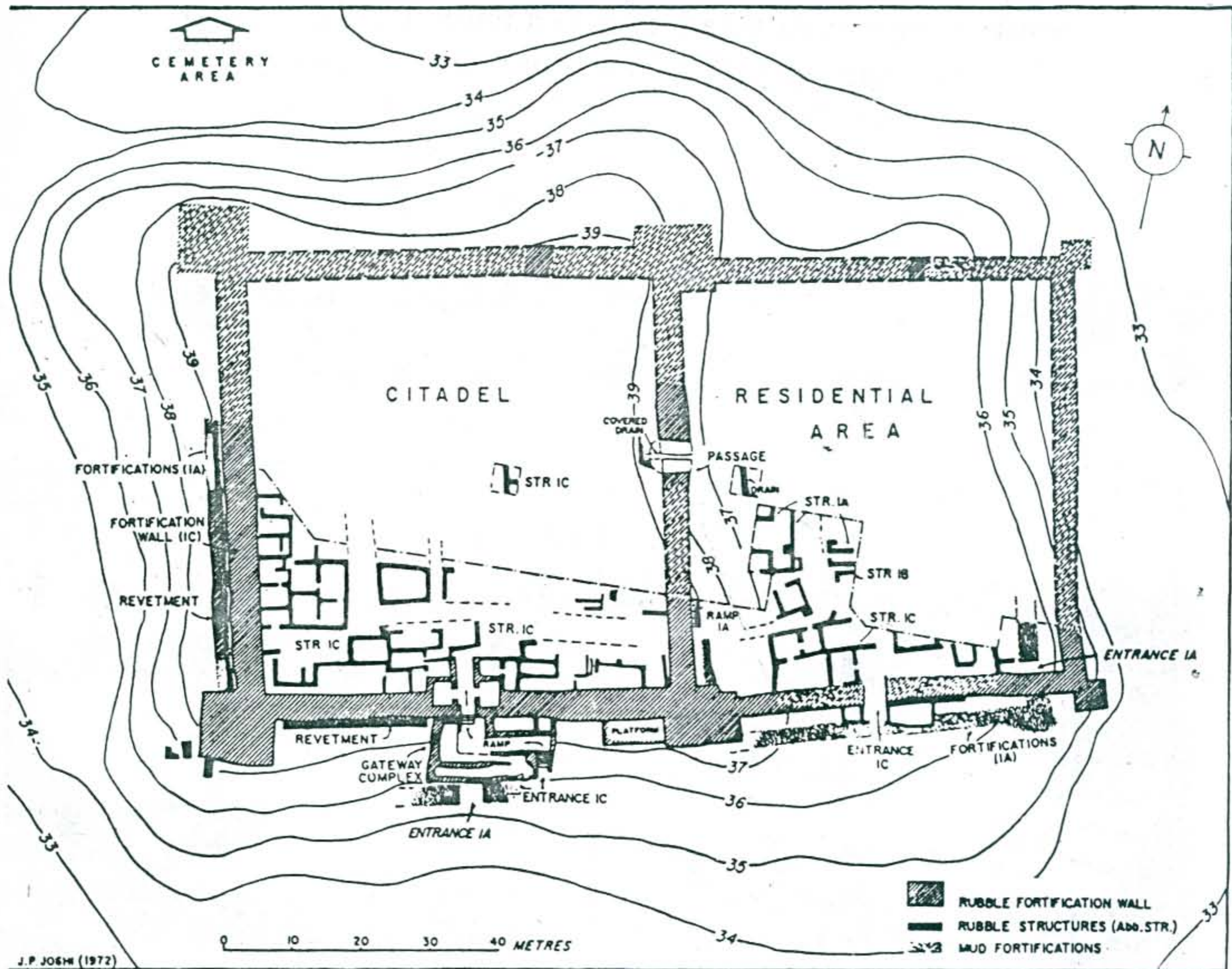


PLATE XVII : Surkotada : Entrance to the citadel from the lower city

Surkotada: site plan



typical Indus seal, long chert blades, beads, etc. The people practised pot-burial as one of the modes for the disposal of the dead. In sub-period IB, the Indus elements became less pronounced with the appearance of a new ceramic tradition of coarse red ware. Among the finds were a copper flat celt and a chisel. The upper

levels yielded sherds of the white-painted black-and-red ware, indicating the arrival, in the area, of a new group of people. Bones of *Equus caballus* Linn were recovered from the Harappan levels.

In sub-period IC, the Indus pottery tradition was further restricted. The dominant ceramic type was the white-painted black and red ware. The new arrivals reconstructed the fortifications in rubble masonry. The citadel had two entrances, one from the lower division on the east and the other on the southern side. Noteworthy objects obtained from the deposits of this sub-period included beads of steatite and carnelian, a big teracotta painted bull, square terracotta tanks and a few chert blades.

PADRI

The ancient site at Padri, very near to the Gulf of Cambay, is about 2.5 km south of the village Padra Gohil Ni in district Bhavnagar, Gujarat. The mound is locally known as Kerala-ne-Dhoro. The site measured 340 m east-west x 210 m north-south and has a cultural deposit of 3.2 m.

The excavation at Padri has yielded a sequence of two cultures. The first one, earlier designated as pre-Harappan but now as Early Harappan by the excavators, was followed by the remains of the Harappan period.

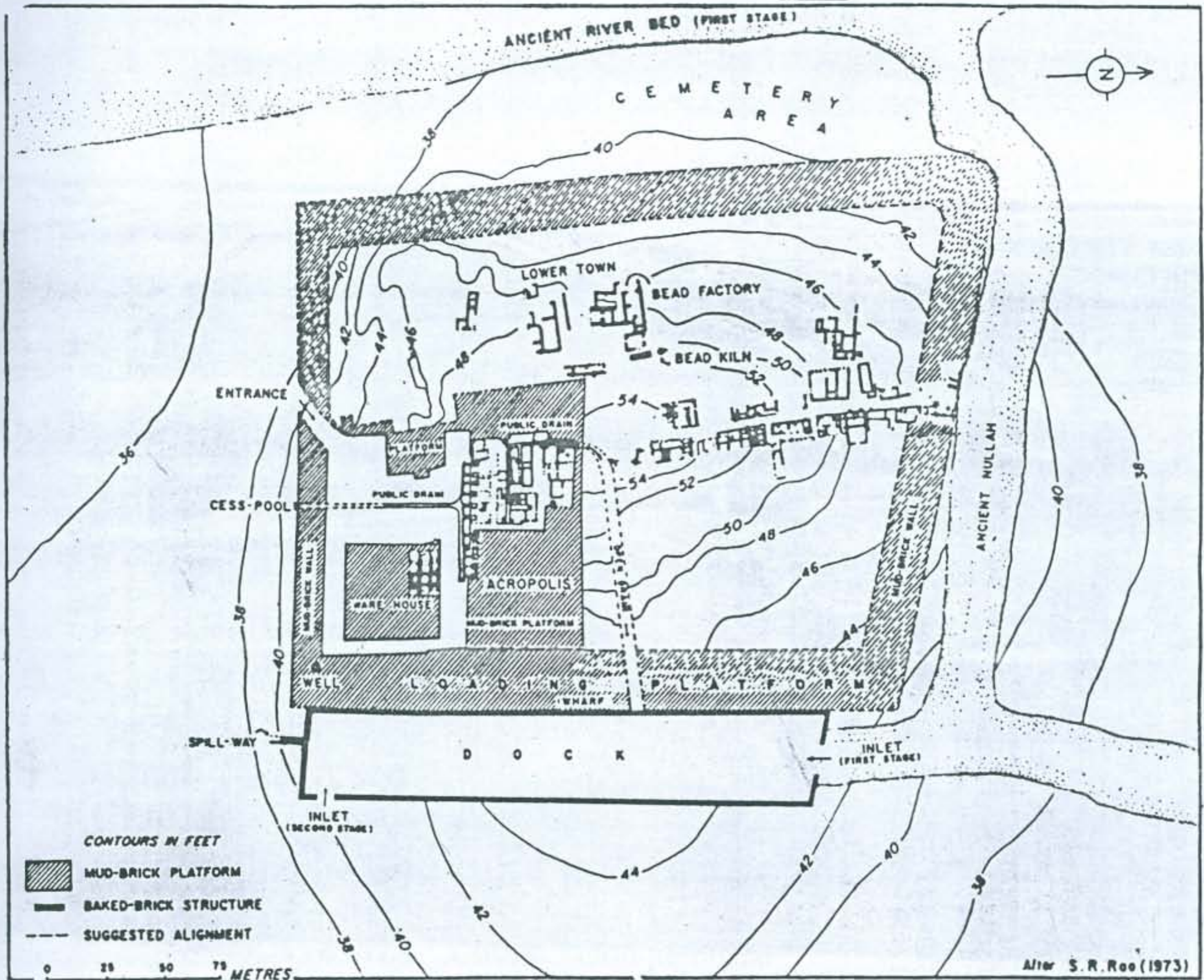
Early Harappan is represented by 60 cm thick deposit which has yielded a distinct red-ware. This ware constitutes nearly 96% of the total pottery made of coarse clay. It is not fully oxidised and consists of bowls

and globular pots with out-turned rims. The early Harappan level has revealed a complex of inter-connected nine rooms. This complex is 12.5 m square oriented along the cardinal directions. Evidence of copper smithy, flint-knapping and provision for storage has been found in the complex. The other important finds from this level are Harappan letters on the pottery. Copper articles of Harappan type were also collected. Mud-bricks are in the ratio of 4:2:1.

The Harappans, too, were living in squarish or rectangular houses with low walls, made of sun-dried bricks in the ratio as given above. The floors were plastered with cowdung. Four phases of structural activity have been found in the Harappan period. Three unique painted storage jars were found and out of these the largest one is unique. The design painted on it over a red surface has a linear human figure with a horned headgear flanked by two pairs of two curved lines on the right and three pairs on the left. The human figure is depicted moving his right leg and hand brought forward and the left ones backward. The figure wears a skirt of grass. The other jars have three decorative motifs of a horned headgear with loose hair on the upper half of the jar.

LOTHAL

Lothal is situated 80 km south-west of Ahmedabad on the coastal flats at the head of the Gulf of Cambay. Being located only 16 km northwest of the junction of Sabarmati and Bhogavo rivers, it was subject to frequent floods. At the same time, it had the advantage of



Lothal: site plan

commanding the navigable estuaries of both these rivers. Due to its being a low natural mound, it had been reinforced with mud and mud-bricks against the annual floods on more than one occasion. The excavation revealed five phases of continuous occupation. While the first four phases reveal the mature Harappans culture, the fifth is a later manifestation. The settlement was rectangular on plan and consisted of two parts: citadel and lower town. The citadel or acropolis was

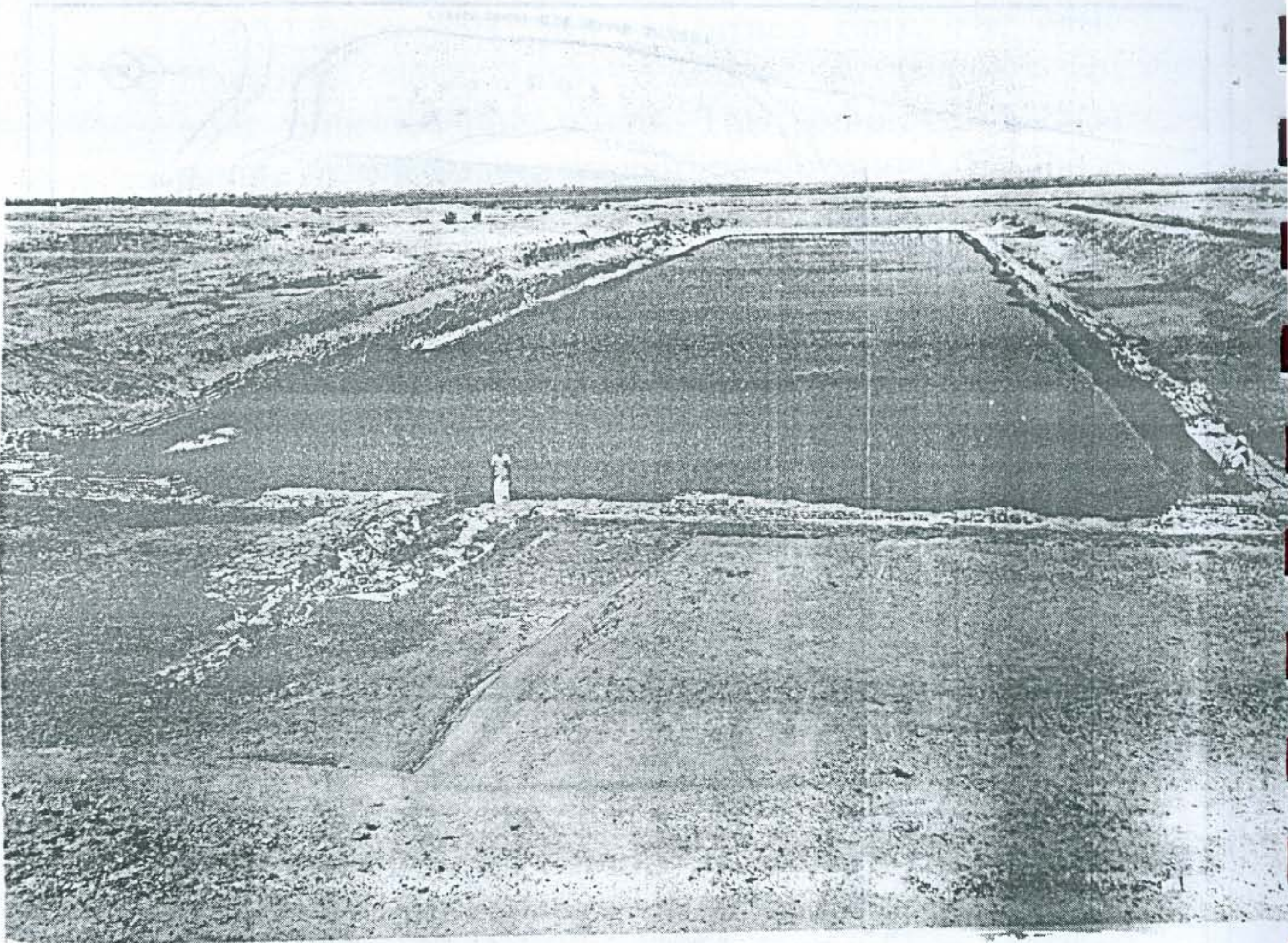


PLATE XVIII : Lothal : Dockyard

located in the south-western part and was distinguished by its eminence being built upon mud and mud-brick platforms. Of the structures, exposed within the citadel, the warehouse is, perhaps, more noteworthy. Built on a 4.0 m high podium, it had 64 blocks of mud-bricks, serving as a base for a wooden superstructure which got burnt. Burnt clay sealings of normal Indus type, presumably fallen from the stored bales, had been



PLATE XIX : Lothal : Double burial

recovered from the ducts between the blocks. The lower town contained, apart from the residential sectors, a bazar and industrial area. The most individualistic structure brought to light by the excavation was an oblong basin measuring 214 x 36 m, revetted on all sides with baked brick walls. It was furnished with a sluice gate and an inlet. The structure is thought to have been a dock for berthing ships. The occurrence of a circular seal of Persian Gulf style at the site points to the existence of

maritime trade with Gulf region. The finds include seals, chert blades and fish hooks of copper. Besides the Harappan pottery, there are some new shapes and designs which are non-Harappan and show regional manifestation.

To the north-west of the settlement, beyond the town-wall, was located the cemetery. The people buried their dead in an extended position in oval or rectangular grave-pits in which pottery and other objects were also interred. The unique feature of the burials of Lothal, is the occurrence, in some graves, of skeletons of two persons.

KUNTASI

The site at Kuntasi, locally known as Bibi-no-Timbo, is situated on the right bank of the Fulki *nullah* and is spread over an area of about 2 ha. Only half of the site is intact while remaining is under cultivation. Presently, the gulf is 5 km from the site. The site remained occupied during the mature Harappan Period (Period I) and late Harappan Period (Period II) which are assigned time brackets of *circa* 2200-1900 B.C. and 1900-1700 B.C.

There are laid bare structures of four phases out of which the first three belong to Period I and the last to Period II. The structures are built of stone rubble set in mud mortar with a superstructure of mud bricks measuring 38x19x9.5 cm (4:2:1). The citadel has a double fortification wall with a squarish watch-tower on the river front. The main entrance was on the east. It was flanked by rectangular bastions. There were rooms with

attached verandahs along the route leading from the gate. It is quite probable that these were for the security guards. It appears that on the north a few large structures were made for the master craftsmen. A large structural complex on the west having large rooms with kilns, furnaces and storage silos (containing clay bins) is very interesting. This was, perhaps, an industrial establishment. A faience seal has also been found from here. The excavator has also found a platform on the west which, according to him, was for loading and unloading cargo, whereas a ramp on the south-east was provided for going to the river. To the north; outside the fortified area, traces of habitation have been found in the fields, possibly meant for the local labourers.

Mature Harappan pottery consists of 'S'-shaped jars, pointed based jars, highly decorated dishes, short-stemmed stud-handled bowls, ledge-necked jars, etc. Bichrome pottery having red and buff surface painted with black and brown is also met with. The other finds of Period I include terracotta toy cart-frames, cubical chert weights and a few bone tools. A complex in the west has offered evidence of pottery kilns and also a few chert blades in one of the rooms. Long tubular carnelian beads, numerous faience and steatite beads, double spiralled copper ring are other important items from the site. The Harappan settlement at Kuntasi was plausibly a port during period I for exporting items of ivory, carnelian etc., through the water routes in the gulf of Kutch. However, in period II, the maritime trade declined as everywhere else in the Harappan domain.

NAGWADA AND NORTH GUJARAT

The archaeologists working in north Gujarat believe that there was an indigenous chalcolithic culture with whom the Harappans of the mature/urban and post-urban phases came in contact. The earliest culture is found distinguishable by its distinct pottery and a unique burial practice.

Nagwada, district Surendranagar, a late Harappan rural settlement, has yielded rubble and brick structures, late Harappan ceramics, a rich collection of pieces of ornaments made of gold etc., copper tools, beads of steatite, semi-precious stones and clay nodules. The burials that were found there included both extended inhumation and symbolic post-burials.

DAIMABAD

Daimabad, lying on the bank of Pravara, a tributary of the Godavari in district Ahmadnagar, attracted the attention of the scholars owing to the find of a cache of four exquisite bronzes comprising an elephant, a rhinoceros, a buffalo and a chariot yoked to a pair of bullocks and driven by a nude human figure. They all together weigh about 65 kg. Subsequent excavation at the site has brought to light a distinct Harappan, though late, horizon from where, besides pottery, were collected two terracotta seals, one pottery rim bearing three Harappan signs and an extended burial lined with the bricks of 4:2:1 ratio.

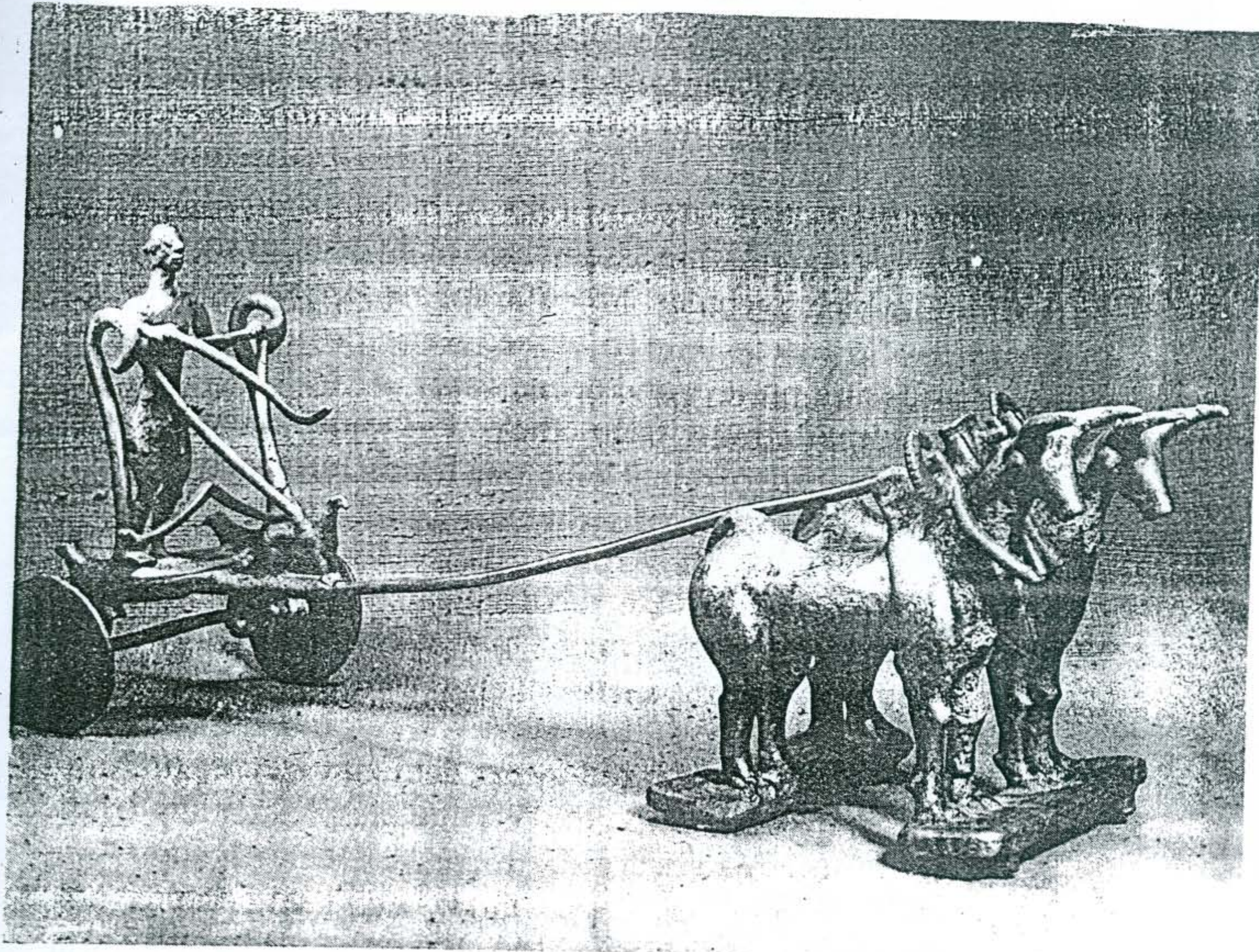


PLATE XX : Daimabad : Bronze Chariot

BHAGWANPURA

The excavation at Bhagwanpura, district Kurukshetra, revealed two-fold cultural sequence designated as sub-period IA and IB in a deposit of 3.20 m showing for the first time the inter-locking of late Harappan culture with that of Painted Grey Ware pottery.

Sub-Period IA revealed a late Harappan settlement on mud-platforms. One such mud-platform, measuring 4.25 x 10.0 m, was found furnished with a landing step. After an accumulation of a deposit of 0.70 to 0.80 m, the settlement was devastated by a flood. In sub-period IA there is a very interesting assemblage of diverse ceramic tradition which includes late Harappan, a red ware similar to Cemetery 'H', an incised ware, a thick grey ware, and Bara pottery and ochre ware.

The other finds from the sub-Period include terracotta figurine of a bull with long horns and pinched up hump leg portion of a human figure, terracotta wheels, copper rods, pins, beads of faience, semi-precious stone, and terracotta bangles. A carnelian pendant, carved in the form of a humped bull, although collected from surface, strongly recalls Harappan workmanship.

Sub-Period II is marked by the coming together of the late Harappan and the PGW using peoples. In the early stage of this occupation the settlement was inundated by another flood. However, the people continued to live at the site. Three phases of structural activity have been noticed in this sub-period. First, the people were living in round and semi-circular huts of wattle and daub. In the second phase, a 13-roomed mud-walled house with a corridor in between having two sets of rooms and a courtyard in the eastern side is available. In the final phase of structural activity, houses made of burnt bricks were built as indicated by a scatter of such bricks which came up due to ploughing activity. Oval shaped structures are available which had a

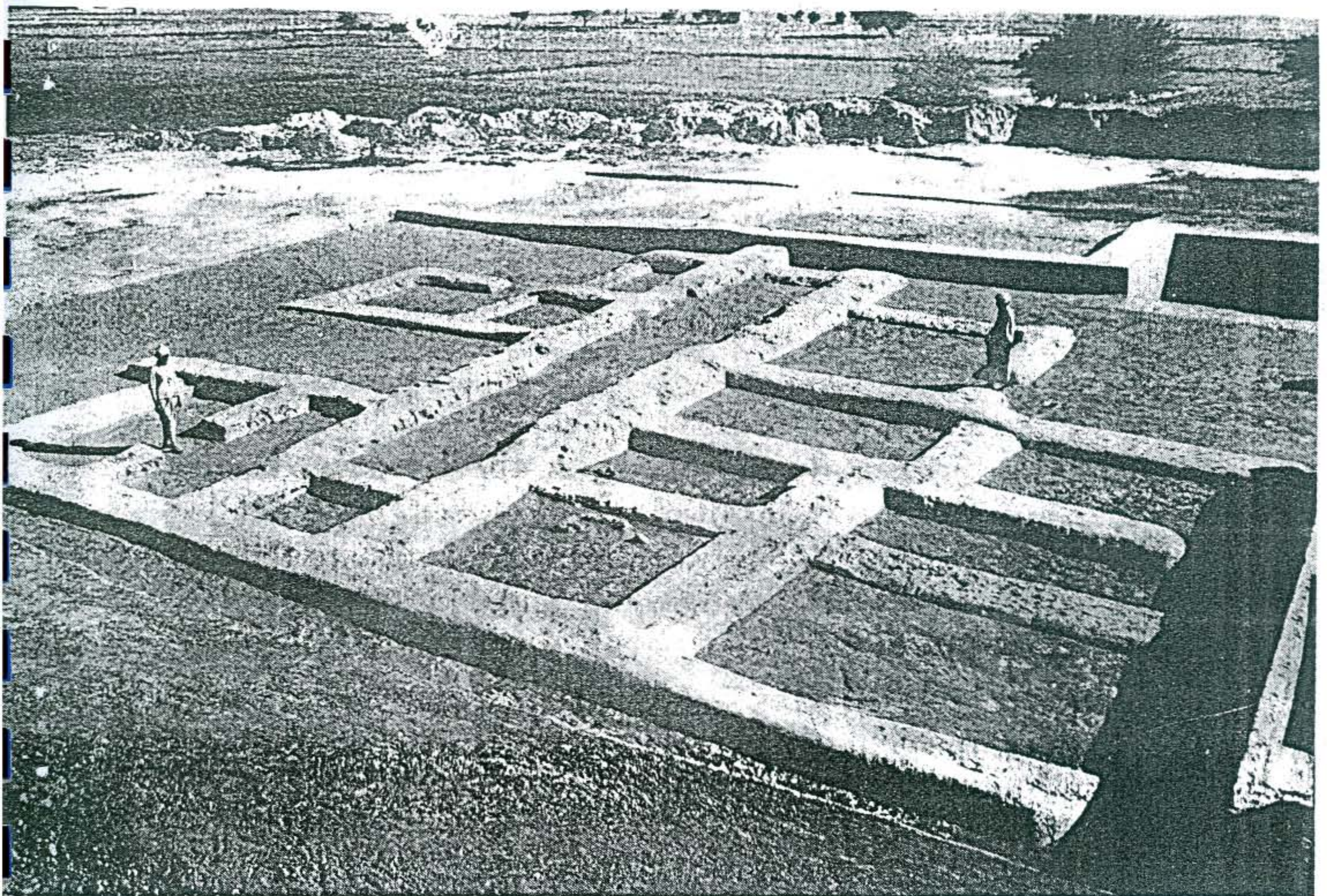


PLATE XXI : Bhagwanpura : Thirteen roomed house from the overlap period

domical roof and perhaps appear to be connected with some religious practices.

Two skeletons, one of an adult of advanced age and the other of a child of 8 to 10 years of age, have been unearthed. The skeletons were found lying in north-south orientation with head towards the north and face tilted towards the west. While in the case of the adult, a grave pit-line was available, no such line was traceable in case of the infant. Surprisingly, no grave

goods were found in the graves.

The pottery includes late Harappan types and Painted Grey Ware. Besides usual painted designs in Painted Grey Ware, geometrical designs consisting of Maltese cross and intersecting circles giving rise to six or four petalled flower are found.

The other important finds of the sub-period II include terracotta anthropomorphic figure, wheeled terracotta incised rams, birds, dogs, cart-wheels with or without hubs, hopscotches, decorated dishes, ear-ornament, violin-shaped mother goddess used as pendants, made out of a grey potsherd, bone needles, pins and styli. The most remarkable finds are the glass bangles in sea-blue, white and black colours and are datable to at least circa 1400 B.C. Animal skeletal remains from the excavation include cattle, sheep, goat, ram, pig, dog and *Equus cabalus* Linn. Cattle outnumbered other species.

HULAS

Hulas, district Saharanpur, Uttar Pradesh, is located on the left bank of a dried-up tributary of river Yamuna. It revealed a five fold sequence starting from the late Harappan period sub-divisible into three structural phases having mud brick houses in lower phase and the circular huts in the upper levels. The pottery is distinguished by a sturdy red ware of late Harappan tradition, although a few non-Harappan forms and motifs in paintings were also present. A noteworthy discovery is a terracotta seal without knob but with three Harappan signs. Evidence of cultivated

rice and *ragi* is available from the late Harappan levels. Amongst important finds are terracotta wheels, cakes, beads of steatite, faience and carnelian beads, and copper objects. The antiquity of the site can be placed in the beginning of the second millennium B.C.

This culture was succeeded by the Painted Grey Ware period when the settlement was established away from Harappan settlement.

